

The ultimate prize — a new species of *Erica* !

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There are many plant lovers who would dearly like to discover a new species of plant. This privilege does not come to all those who comb wild areas in search of this elusive prize. In some cases it is luck that plays an important part of the story.

So it was in the winter of 1999 that our son, Thomas, went climbing and mountain-biking on the Matroosberg in the inland Western Cape mountains, to experience a recent heavy fall of snow. He was requested to bring back any *Erica* species he saw—just in case there was something interesting! When he returned he brought us one flowering specimen and several others that still had old fruits from the previous summer. Much to our surprise and delight we found that his flowering specimen was a new species not recorded before. He had seen only a few plants due to the deep snow. A few days later we visited the area with him by which time much of the snow had melted (Figure 1), but in the open, stony, warmer, north-facing areas we found many plants of his species in full flower (Figure 2). We thus name the species after him — *filialis* = of our son (unfortunately there already exists the species, *E. thomae* L. Bolus, named after Thomas Stokoe).

Erica filialis is most similar to *E. setociliata* H. A. Baker, but differs in having

- 1) leaves with long gland-tipped hairs on the margins only, not also on the abaxial surface;
- 2) sessile to subsessile larger glands on the margins of the sepals, not long thinly stalked small glands all over the surface; sepals half the length of the corolla tube and ovate, not about as long as and obscuring the corolla tube and oblong-lanceolate;
- 3) corolla glabrous, purple and very sticky, not finely hairy (occasionally glabrous), white to pinkish and non-sticky;
- 4) anthers dark brownish red and hard in texture, not pale yellow, thin and delicate.

Both species grow at high altitudes on the inland mountains where they are subjected to snow, but the new species flowers in August and *E. setociliata* flowers from September to November.



Fig. 1. Thomas Oliver with his discovery on Matroosberg.



Fig. 2. *Erica filialis*. Close-up of flowering branch of the type collection.

Other species that may be related are *E. trichadenia* Bolus, *E. cederbergensis* Compton and *E. coarcervata* H. A. Bak. which have a similar facies and share a number of characters but these are insect-pollinated with nectaries around the base of the ovary.

This locality is a well-collected one and the discovery of a new species just above the ski lifts prompted us to investigate all collections from the Matroosberg which at 7,000ft is the highest mountain in the region. From our database it became clear that many collectors have visited this mountain including Marloth and Bolus in the late 1800s, but all were there from October to January with none in the depths of winter.

From our single visit to the area we recorded *E. filialis* in several populations on the ridge running north from the main peak of Matroosberg and at the head of Spekrivierskloof (Figure 4). The main (type) population occurred on west-facing gradual slopes due east of Ski Club Hut. These slopes are stony/rocky with very short, restiad dominated vegetation. The plants were small and

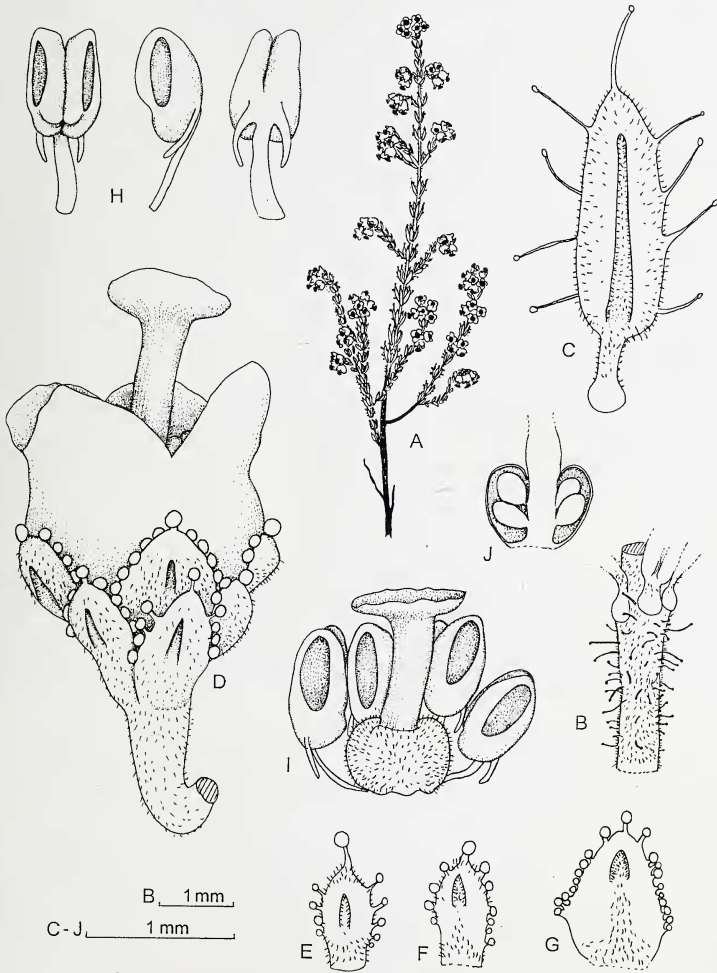


Fig. 3. *Erica filialis*. A, flowering branch; B, stem; C, leaf, abaxial view; D, flower; E, bract; F, bracteole; G, sepal; H, stamen, front, side and back views; I, gynoecium and androecium; J, ovary cut open longitudinally. All drawn from the type, *Oliver 11300*.

compact to slightly spreading and barely appearing above the restiads. The only other heath in the area was *E. junonia* Bolus which still bore some old flowers from the previous season (November 1998–January 1999). It was interesting to note that the material of *E. filialis* possessed capsules from the previous flowering period, some with seeds still inside, stuck on the plants.

A few additional small populations were located further north along the ridge in rocky outcrops. One small group of plants was found growing in the lee of very large outcrops. The shrubs were much more diffuse and bore more open-backed leaves.

The species clearly grows in an area which is subjected to a considerable amount of snow when flowering takes place. This would seem very surprising for pollination, but when we visited the area in perfect sunny weather the newly opened flowers, on being disturbed by us, easily shed clouds of pollen.

This factor coupled with the enlarged stigma and lack of any nectaries around the base of the ovary clearly points to pollination by wind. This would obviate the need for insects to be flying around under the chilly conditions.

Erica filialis E. G. H. Oliv., sp. nov.

Ericae setociliatae H. A. Baker affinis sed ab ea foliis pilis longis glandulosis solum in marginibus (non margine et pagina abaxiali), glandibus majoribus sessilibus ad subsessilibus in marginibus sepalorum, sepalis ovatis corolla dimidio brevioribus (non aequantibus), corolla glabra viscosissima purpurea (non puberula sicca rosea), antheris atroxerampelinis (non stramineis) differt. Figurae 2, 3 & 5.

TYPE: SOUTH AFRICA, Western Cape, 3319BC, Hex River Mtns, Matroosberg at head of Spekrivierskloof, 1940 m, 19 August 1999, E.G.H. & I.M. Oliver 11300 (NBG, holotype; BM, BOL, E, K, MO, NY, P, PRE, S).

Shrub compact subspreading, rarely sparse and erect, 150–250mm tall, much branched single-stemmed reseeder. **Branches:** numerous main branches ending in inflorescences; occasional secondary branchlets not at every node, 3–6(–10)mm long, often cernuous, terminating in an inflorescence; stems covered with stiff dense short hairs and long gland-tipped hairs; internodes 2–4mm long. **Leaves** 4-nate, usually subspreading but spreading in shady conditions, $\pm 2.0 \times 0.6$ mm, narrowly elliptic-lanceolate, acute, adaxially and abaxially slightly rounded and flattened towards the base with rounded or subacute margins, covered with very short fine hairs, ciliate with a few long sticky gland-tipped hairs and one apically, sulcus narrow and open at base; petiole ± 0.5 mm long, finely and shortly hairy. **Inflorescence: flowers** 4-nate in 2(1) whorls at ends of main and secondary branches, umbel-like; pedicel ± 1.2 mm long, basally curved, finely hairy; **bract** partially recaulescent and approximate to the

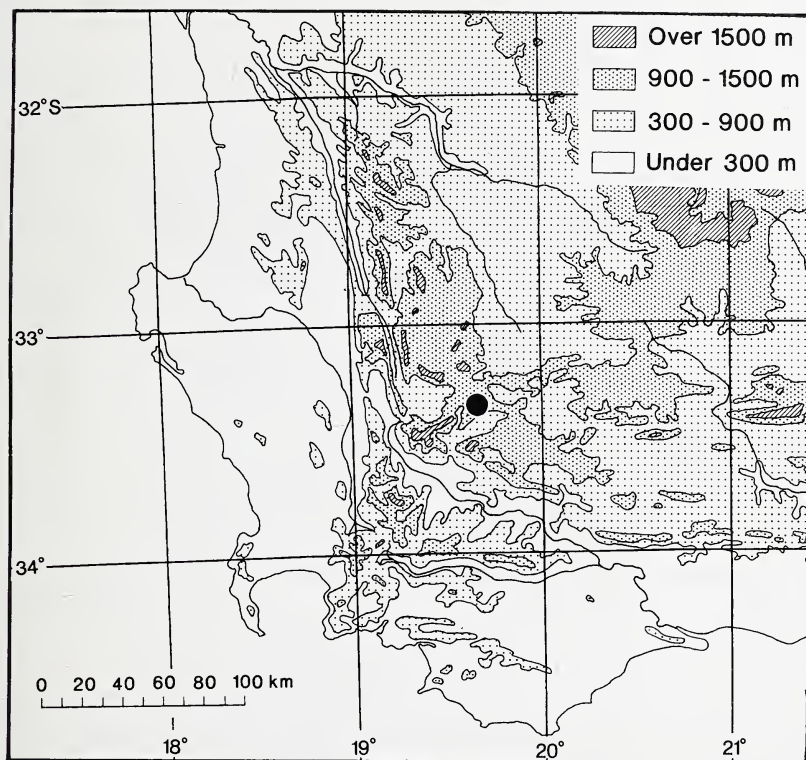


Fig. 4. Known distribution of *Erica filialis*.

calyx, sometimes subapproximate, $\pm 1.0 \times 0.6$ mm, elliptic, covered with short fine hairs at base and apex, margins with a few shortly stalked sticky glands and one larger one apically, green to dark red; **bracteoles** 2, approximate to calyx, $\pm 0.8 \times 0.6$ mm, like the bract except the glands with shorter stalks. **Calyx** 4-partite; segments adpressed to the corolla, $\pm 1.0 \times 0.8$ mm, ovate, greenish to dark purple, shortly and finely hairy in the mid and basal region, margins with large sticky glands these mostly sessile sometimes very shortly stalked, apical gland often larger. **Corolla** 4-lobed, $\pm 2.0 \times 1.8$ mm, urceolate to cyathiform, dark purple occasionally paler, glabrous, very sticky; lobes erect to slightly spreading, $\pm 0.5 \times 1.0$ mm, subacute to emarginate, entire. **Stamens** 8, free, included; filaments ± 1.2 mm long, straight, glabrous, white; **anthers** bilobed, erect, dorsally attached, elliptic in outline adaxially, appendiculate, spurs narrow ± 0.5 mm long, pointing adaxially, glabrous; thecae $\pm 0.8 \times 0.5$ mm, obliquely elliptic in outline laterally, light brown, glabrous; pore two thirds length of theca;

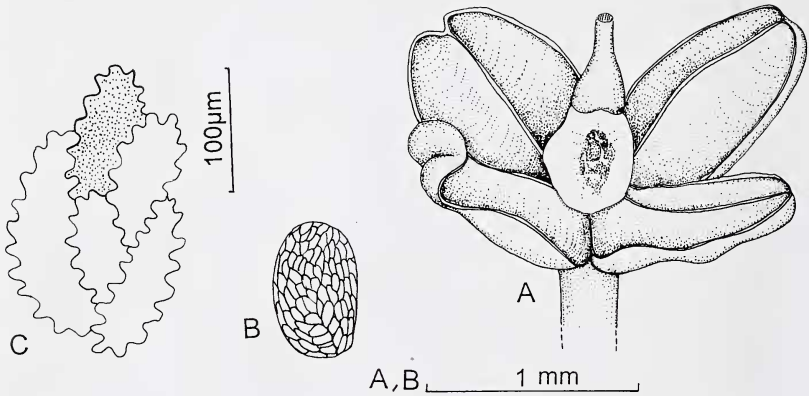


Fig. 5. *Erica filialis*. A, capsule; B, seed; C, testa cells. All drawn from the type, *Oliver 11300*.

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pollen in tetrads. **Ovary** 4-locular, $\pm 0.5 \times 0.7$ mm, depressed globose, slightly emarginate, finely hairy to glabrescent, with no nectaries; ovules 3 or 4 per locule, suberect from a central placenta on the axis; **style** 0.8–1.2 mm long, manifest to exerted, glabrous; **stigma** large peltate, blackish purple. **Fruit** a dehiscent capsule, $\pm 1 \times 2$ mm, valves spreading to $45\text{--}70^\circ$, septa equally on columella and valves; **seeds** $\pm 0.7 \times 0.4$ mm, irregularly ellipsoid, shallowly reticulate, cells $\pm 100\text{--}180 \times 50\text{--}70$ μm , with jigsawed anticlinal walls and numerous small pits in the inner periclinal walls. Figures 2, 3 & 5.

PARATYPES: WESTERN CAPE.—3319: (–BC), Hex River Mtns, Matroosberg, head of Spekrivierskloof, 1900 m, 14-09-1999, *T.N. Oliver in NBG 345124 (NBG)*; *ibid.*, 2000 m, 19-08-1999, *E.G.H. & I.M. Oliver 11301 (NBG, PRE)*.